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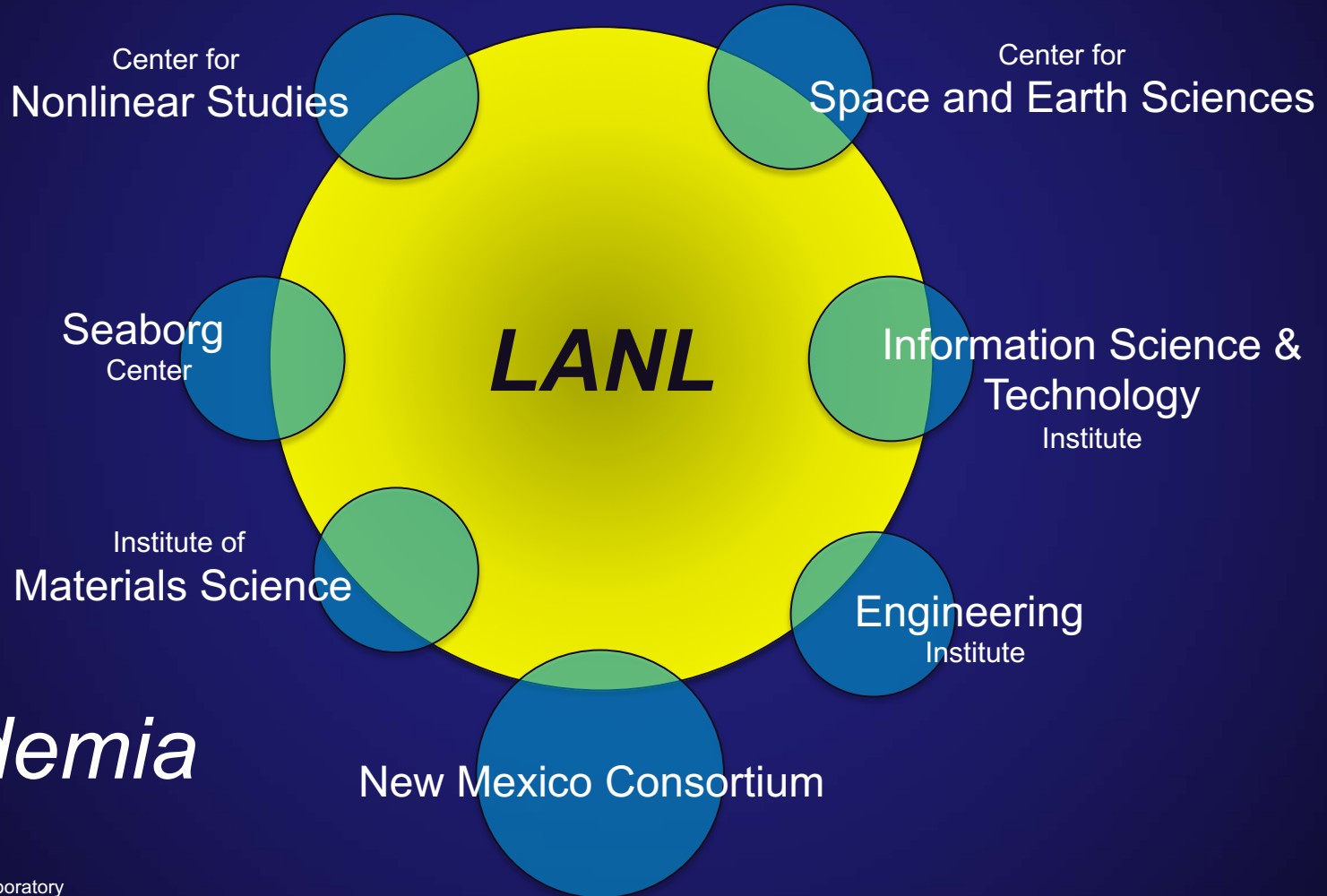
# Academic Interactions: Institutes and Consortium

**Alan J. Hurd**

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National Security Education Center  
Science Technology and Engineering

OSELP  
March 12, 2019





*Academia*

Informal  
collaborations

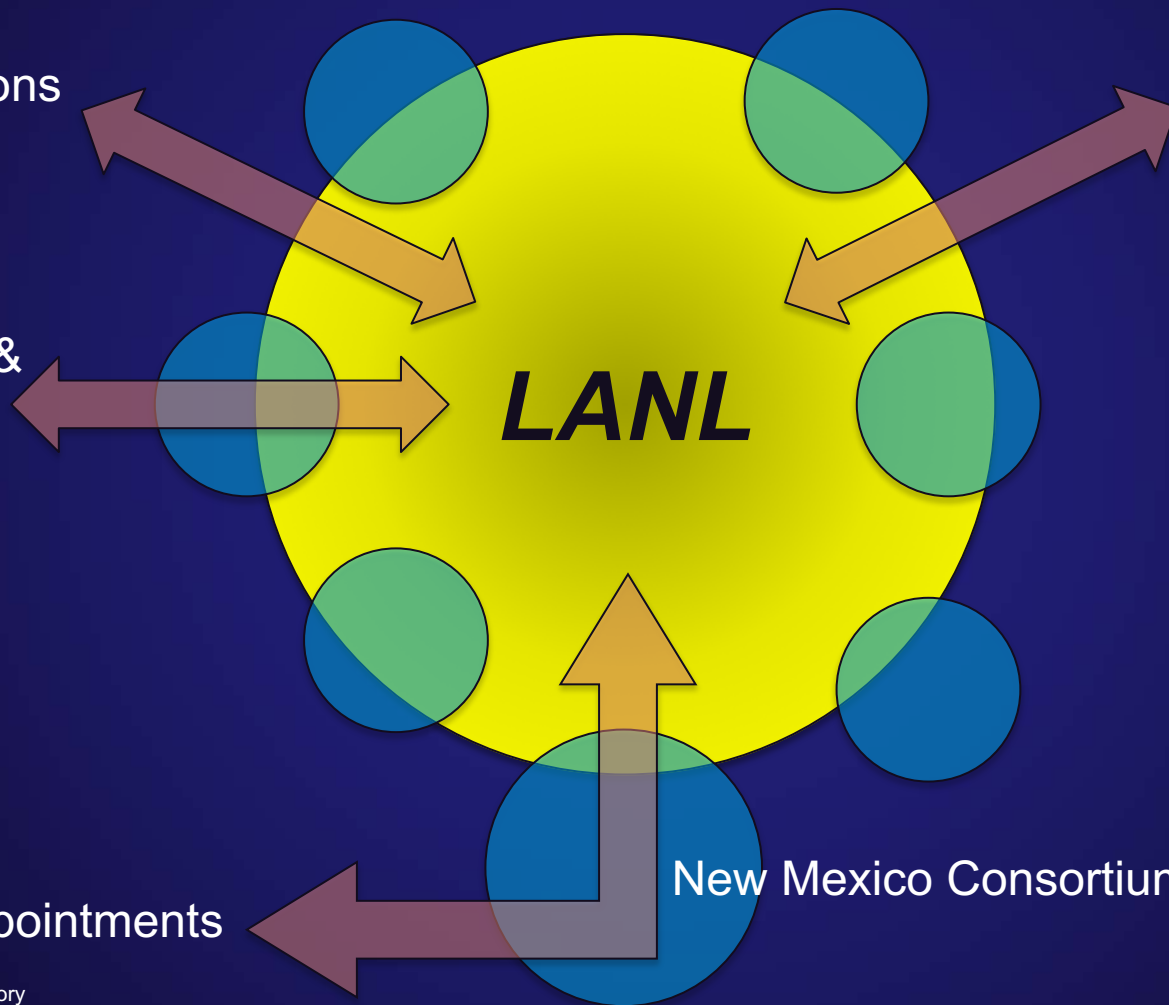
Contracts

Students &  
Summer  
Schools

***LANL***

Joint Appointments

New Mexico Consortium



- **Center for Nonlinear Studies**  
Interdisciplinary science of complex systems
- **Center for Space and Earth Science**  
Astrophysical, space, earth, & climate sciences & their signatures
- **Engineering Institute**  
Structural health monitoring, cyberphysical Systems
- **Information Science & Technology**  
Education, collaboration, research in IS&T
- **Institute for Materials Science**  
Advancement of interdisciplinary materials science
- **Seaborg Institute**  
Actinide science & Plutonium Center of Excellence

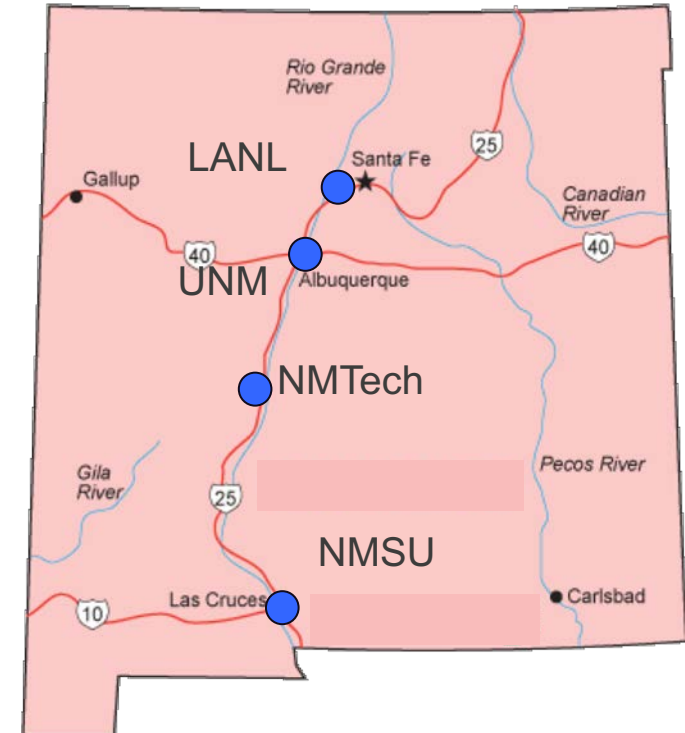


# Recent and ongoing summer schools at LANL

- **Computer System, Cluster, and Networking Summer Institute**
- **q-Bio Summer School**
- **Parallel Computing Summer Research Internship**
- **Los Alamos Dynamic Summer School**
- **Cyber Security Summer School**
- **Machine Learning Summer School**
- **Quantum Computing Summer School**
- **Computational Physics Summer School**
- **Nonproliferation Summer School**

# NMC was created in 2006 as part of last contract

- **Initiated by a Teaming Agreement between the University of California and**
  - University of New Mexico
  - New Mexico Institute of Mining and Technology
  - New Mexico State University
- **Incorporated as a non-profit 501(c)(3).**
  - Board Of Directors - 2 members from each University and 2 non-voting members from LANL.
  - Financial support provided by LANL was 100% of budget in 2006; now less than 7%.
- **Institutional Agreement signed 2010 formalizing relationship, renewed 2014 and 2018.**





# NMC today has over 100 FTEs.

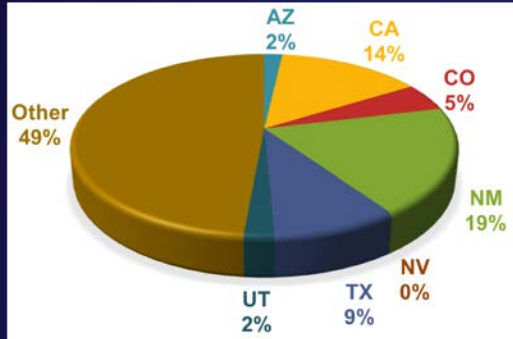
Ultrascale Systems Research Center in  
Los Alamos Research Park



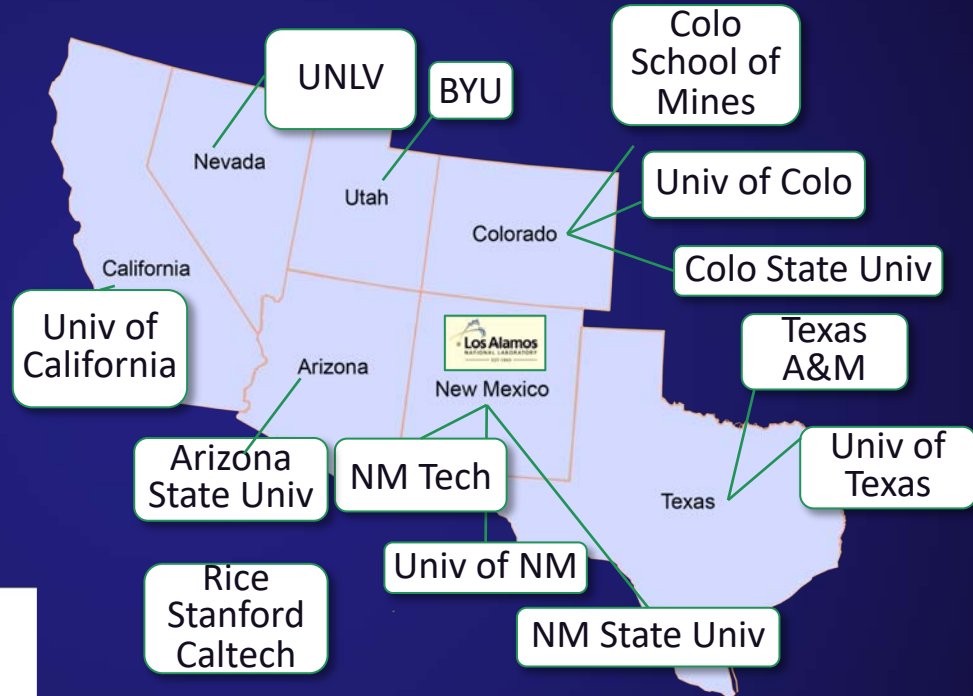
NMC Biolab at Entrada

- **Research - Focus Areas**
  - Advanced Computing
  - Modeling and Analysis
  - Plant Biology
  - Biomedical Technology and Engineering
- **Education**
  - Mentored Research (Postdocs, Students, Interns)
  - Summer Schools
- **Outreach**
  - Conferences/Workshops
  - Public Lectures
  - Facility Tours
- **Economic Development**
  - Incubator
  - Start-up Support

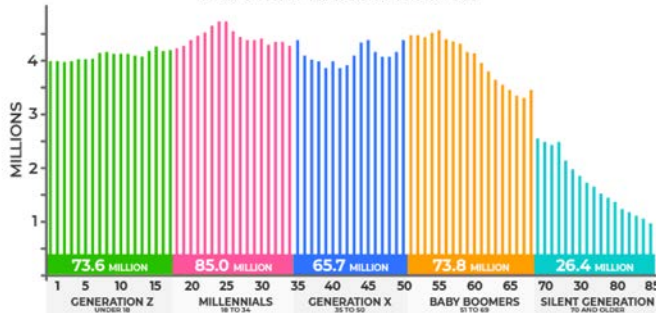
## University Contracts



- Half of LANL university contracts (over \$25M) stay in the region
- Half of LANL staff (all employee types) come from the region



U.S. POPULATION BY AGE



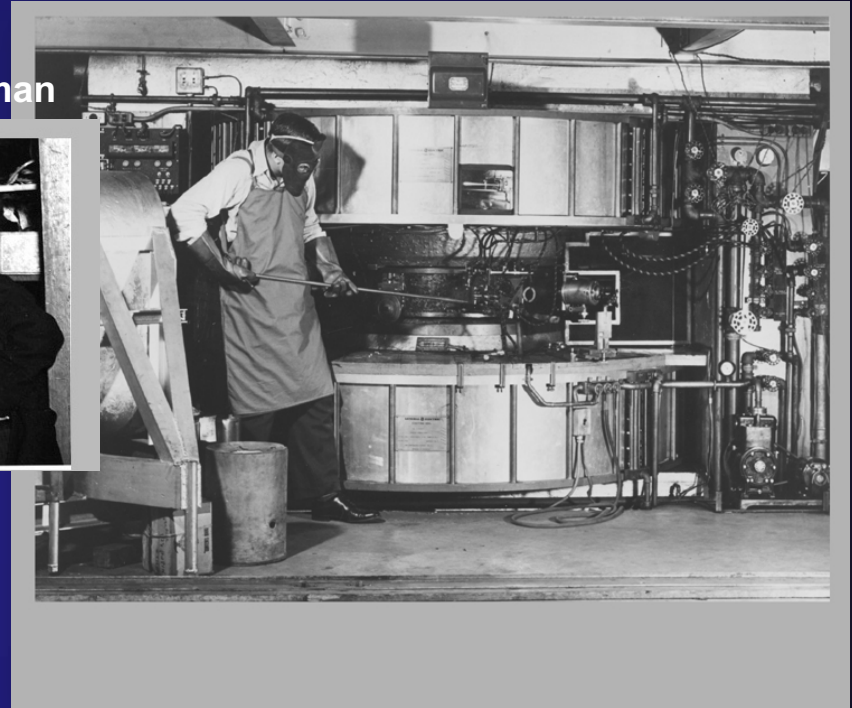
***Regional universities are important to renew 1/3 of LANL workforce by 2023***

Friedell, Wilson, Bridgeman



Rosen

Rosen, Allred, et al took over the cyclotron in 1945



## ***Director Norris Bradbury on university cooperation (1946)***

*"...this Laboratory comprises one of the most excellently equipped physics laboratories in the country... its facilities are not receiving their widest use. We feel, and I think justifiably, that the facilities which can be devoted to fundamental research should be fully employed in this pursuit."*

# Our advanced facilities now host university visitors for collaborative research

